

PADROL[®] 200

FOR QFN, DFN, AND OTHER PAD-STYLE APPLICATIONS

Your Solution for Analog / Mixed Signal / RF Testing

Johnstech's patented ROL[®] technology provides excellent electrical performance and proven mechanical reliability for Precision Analog, Mixed Signal and RF applications. The ROL[®] 200 Series provides Contact/Elastomer configurations for the unique challenges of matte tin and NiPdAu packages.

ROL[®] 200 Contacts

Gold-Plated
Low-Force XL-2

Device Platings

Matte Tin & Tin-Based
Nickel Palladium Gold

Characterization

ROL[®] 200 Contactors are ideal for Manual Device Evaluation, Lab Testing, Prototyping and Characterization

- Designed to test to 20 GHz
- Reliable and repeatable results
- Lab Performance correlates to Production Test Floor
- Robust Manual Actuator life of 10k+ insertions

FEATURES & BENEFITS

FREQUENCY	26.4GHz Matte Tin; 18.5GHz NiPdAu
PITCH	≥ 0.3 mm
TEMPERATURE	-40°C to 155°C
CURRENT CARRY CAPABILITY @ 100%	3.8A Matte Tin; 3.0A NiPdAu

Production Test

The "rolling contact" design of the ROL[®] Contactor, which creates a self-cleaning wipe action, provides extensive Production Test benefits:

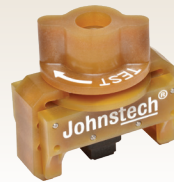
- Consistent Contact Resistance
- Optimized Electrical Performance
- Higher First Pass Yield
- Repeatable Site-to-Site Performance
- Longer MTBA (Mean Time Between Assists)
- Prolonged Load Board Life
- Simple Maintenance & Rebuilding
- Improved OEE (Overall Equipment Efficiency)
- Lower Overall Cost of Test



Gold-Plated
Contact Profile
Matte Tin
Configuration



Low-Force XL-2
Contact Profile
NiPdAu
Configuration



DL-VCMA Plus™
Double-Latch Vertically
Compliant Manual
Actuator



SL-VCMA
Single-Latch Vertically
Compliant Manual
Actuator

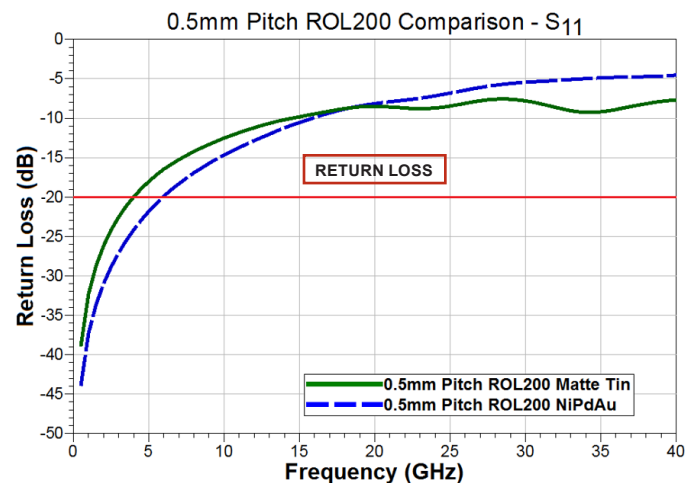
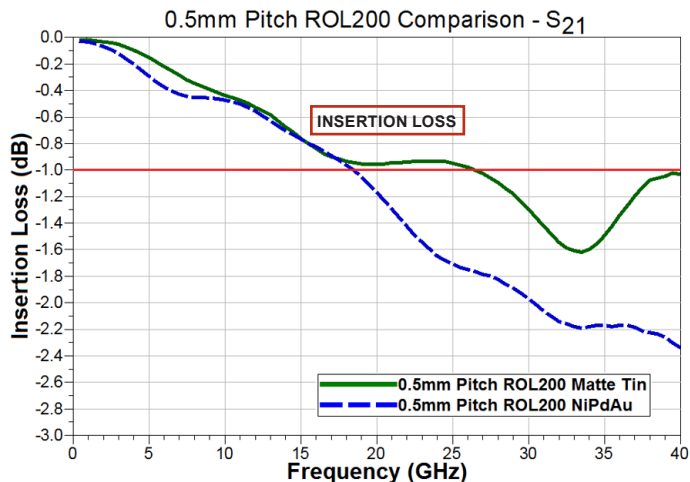


PAD ROL[®] 200

Electrical Specifications	Matte Tin Configuration	NiPdAu Configuration
Electrical Length (compressed height):	2.00 mm	2.07 mm
Inductance:	Self: 0.37 nH Mutual: 0.17 nH	Self: 0.55 nH Mutual: 0.24 nH
Capacitance:	Ground: 0.17 pF Mutual: 0.07 pF	Ground: 0.18 pF Mutual: 0.12 pF
S ₂₁ Insertion Loss (GSG):	-1dB @ 26.4 GHz	-1dB @ 18.5 GHz
S ₁₁ Return Loss (GSG):	-20dB @ 3.9 GHz	-20dB @ 5.8 GHz
S ₄₁ Crosstalk (GSSG):	-20dB @ 13.5 GHz	-20dB @ 29.5 GHz
Average CRES:	30 mΩ	<20 mΩ
Current Carrying Capability*: (Duty cycle 100%, 50%, 1%)	3.8A, 6.0A, 9.8A	3A, 5.1A, 9.3A
RMS Current Carrying Capability**: (Duty cycle 100%, 50%, 1%)	3.8A, 5.3A, 37.6A	3.0A, 4.2A, 29.9A
Current Leakage:	<1pA @ 10V	
Nearest Decoupling Area:	1.58 mm	

NOTE: Specifications for 0.5mm pitch configurations shown here. These specifications are based on a combination of internal and third-party measured testing.

* Test conditions: 300 msec pulse, 20°C temperature rise. Higher currents allowed for higher temperature rises.

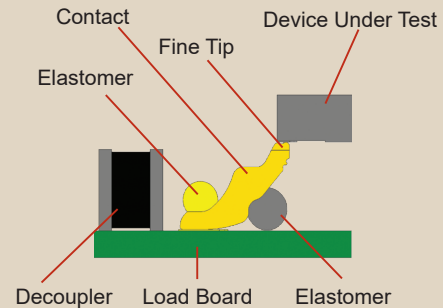


Mechanical Specifications	Matte Tin Configuration	NiPdAu Configuration
Physical Compressed Height:	1.40 mm	
Contact Life *** (# of insertions, Typical Performance):	Elastomers = 300,000 Contacts = 500,000+ Housing = 2,000,000+	
Contact Compliance:	0.20 mm	
Contact Force (per contact):	70 grams	30 grams
Temperature:	- 40°C to 155°C	
Housing Material:	Torton [®] 5030	
Contacts:	Gold-Plated	Low-Force XL-2
Contact Material:	BeCuNiAu	Gold-plated Alloy

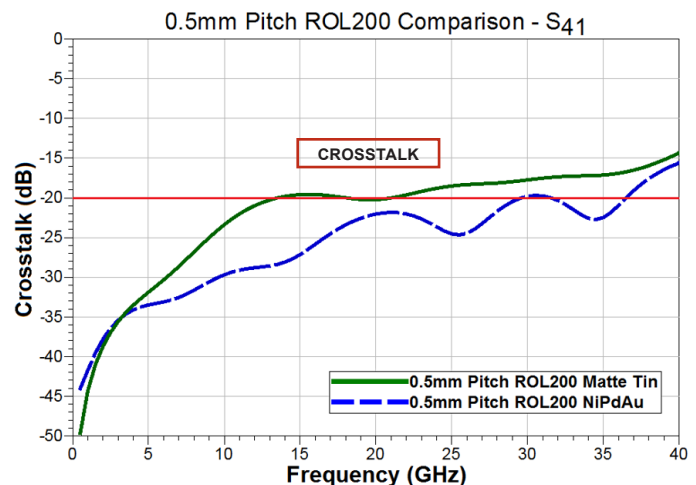
** RMS current carrying capacity for pulsed applications. Values based on measured steady state current capacity, standardized to 1 Hz test cycle, 20°C temperature rise. Higher currents allowed for higher temperature rises.

*** Contact, elastomer, and housing life values are TYPICAL based on Johnstech internal testing. Actual production life will vary based on a wide range of variables including: handler, Contactor, and load board interface; handler plunge depth and velocity; device presentation; alignment plate condition; package plating material and characteristics; test floor conditions; maintenance activities; mounting/fastening techniques; site-to-site coplanarity; docking coplanarity; and temperature extremes.

Methodology



≥ 0.5mm pitch Matte Tin Configuration



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